(54) Title: METHOD OF AND INTERACTIVE DISPLAY FOR EXCHANGING A MESSAGE

(57) Abstract: The social communicative activity is getting involved with internet technology more frequently. People are chatting, playing games and working over the internet. In order to introduce persons being part of one communicative environment to each other a method of exchanging messages is provided that displays a first graphical representation of a first person; displays a sec-ond graphical representation of a second person (408); presents a first introduction message (402) to the first person; the message introducing the second person to the first person; and presents a second introduction message to the second person; the message introducing the first person to the second person.

Method of and interactive display for exchanging a message

The invention relates to a method of exchanging messages, the method comprising:

displaying a first graphical representation of a first person; and

displaying a second graphical representation of a second person.

Further, the invention relates to an interactive display conceived to exchange messages, the interactive display comprising:

first display means conceived to display a first graphical representation of a first person; and

second display means conceived to display a second graphical representation of a second person.

Further, the invention relates to a computer program product and the invention relates to a personal digital assistant.

An embodiment of the method, interactive display, computer program product and personal digital assistant of the kind set forth above is known from Patent US 6,234,802. Here, a method and system for teaching a language to a user in a digitally synthesized interactive three-dimensional graphic representation of an environment are disclosed. The user appears to be situated in the environment and moves within the environment by adjusting the graphical representation of the environment in response to user input. When the user encounters a representation of a person in the environment, the person communicates a challenge to the user, such as by playing a full motion digital video clip of the person. To challenge the user, the person asks the user a question or requests that the user performs a task. The challenge requires language comprehension by the user to correctly respond.

It is an object of the current invention to provide a method that provides an intuitive interaction with a representation of a person in a graphical representation of an environment. In order to achieve this object, the method of exchanging messages according to the preamble is characterized in that the method further comprises:

presenting a first introduction message to the first person; the first introduction message introducing the second person to the first person;

presenting a second introduction message to the second person; the second introduction message introducing the first person to the second person.

By providing graphical representations of a first and a second person within a graphical representation of an environment, a viewing person, for example a user, of these graphical representations sees the relationship between these two persons. In order to introduce these two persons to each other graphically, messages are sent from the first person to the second person and vice versa without the need to the two persons to meet each other physically.

An embodiment of the method of exchanging messages according to the invention is described in claim 2. By triggering the presentation of the introducing message through the selection of the graphical representations of the persons, there is control of which person is being introduced to another person. A third person who knows both persons can perform the control or one of the persons can perform it.

An embodiment of the method of exchanging messages according to the invention is described in claim 3. By including graphical representation of the person who is being introduced, the receiving person of the message receives an indication of the person who is being introduced.

An embodiment of the method of exchanging messages according to the invention is described in claim 4. The graphical representations of the persons within the environment may represent a special relationship between the persons, for example not formally introduced. To emphasize this relationship, a graphical indication from one person to the other person indicates that there exists such special relationship.

An embodiment of the method of exchanging messages according to the invention is described in claim 5. Furthermore, the graphical indication can indicate a bilateral relationship between the persons when there's a graphical indication from one person to the other and vice versa. Thus both persons control the display of the relation between the graphical representations of the persons.

An embodiment of the method of exchanging messages according to the invention is described in claim 6. By sending personal information together with the introduction messages, the persons receive additional information about the other person to whom he or she is being introduced.

It is a further object of the current invention to provide an interactive display that provides an intuitive interaction with a representation of a person in a graphical representation of an environment. In order to achieve this object, the interactive display according to the preamble is characterized in that the interactive display further comprises:

first presenting means conceived to present a first introduction message to the first person; the first introduction message introducing the second person to the first person;

second presenting means conceived to present a second introduction message to the second person; the second introduction message introducing the first person to the second person.

An embodiment of the interactive display according to the invention is described in claim 8.

Embodiments of the computer program product and personal digital assistant are described in claims 9 and 10 respectively.

The invention will be described by means of embodiments illustrated by the following drawings:

Figure 1 illustrates an environment to support social interaction between people;

Figure 2 illustrates a mode of the communicative environment that shows the real-life relationships between the represented persons;

Figure 3 illustrates the main steps of the method according to the invention;

Figure 4 illustrates a pop-up menu comprising a introduction message;

Figure 5 illustrates some examples of curves;

Figure 6 illustrates the main parts of the system according to the invention in a schematic way.

The social communicative activity is getting involved with internet technology more frequently. People are chatting, playing games and working over the internet. Although there exists a lot of communication applications for the internet environment, these applications are often stand-alone and do not provide interaction between the applications. Furthermore, these applications provide limited capabilities for facilitating people during social interaction.

Figure 1 illustrates an environment 100 to support social interaction between people. The communicative environment is displayed on a display comprised within a handheld device. The handheld device is a personal digital assistant (PDA), but it can also be a telephone, a handheld personal computer and the like. The communicative environment represents the users social environment graphically and comprises three modes: "friends and family" 102, "favorites" 104, and "new and exploring" 106. Within the figure, the communicative environment is within the "friend and family" mode as illustrated with 108. The orbiting graphics represent friends, for example Mary 110 and Kim 112 or family, for example Sister 114. Users switch between the modes by pointing with a pointing device like a mouse, pen or the like to one corresponding graphical representation 102, 104 or 106 of the modes. Once the mode is changed, the orbiting graphics change automatically

and represent those features that correspond to the chosen mode. The number of modes is not limited. More modes can be selected too, like for example "work", "vacation" etc.

Within the mode "friend and family", the graphical representation of the persons represent the relation with the user, say Carol. When the user did not interact with a person recently, the graphical representation of that person becomes smaller like the graphical representation of Kim 112 with a minimum size. When the user did interact with a person recently the graphical representation of that person like the graphical representation of Sister 114 becomes larger, with a maximum size. The size of the representation can also depend upon the frequency with which a user has contacted another person. The graphical representations of the persons comprise the name or alias of the person in order to facilitate identification of the graphical representations. The status bar 116 comprises graphical representations of the persons that are currently on-line. Within the example, 120 represents Mary and 118 represents Kim. For example, when the real-life Mary comes on-line her PDA or any other system as previously mentioned will send a message to the PDA of the user Carol. This message will be interpreted as being sent by a PDA with a signature that Mary did come on-line and the representation 120 of Mary will be shown within the status bar 116. When Mary gets off-line the opposite will occur: The PDA of Mary will send a message to the PDA of the user indicating that Mary is off-line and the representation 120 of Mary will disappear from the status bar 116.

Figure 2 illustrates a mode 200 of the communicative environment 100 that shows the real-life relationships between the represented persons. Curve 202 that is drawn from Mary 110 to Kim 112 illustrates that Mary 110 and Kim 112 are acquainted with each other. The graphical representation of the real-life relationship may be al kinds of graphics like icons, arrows etc. Curve 204 represents the real-life relationship between Mary 110 and Peter 206. According to the user of the PDA, there exists no real-life relationship between Kim 112 and Peter 206, because there's no graphical connection between Kim 112 and Peter 206.

Figure 3 illustrates the main steps of the method according to the invention. Step S300 is an initialization step during which the user of the PDA selects the mode 200 of the communicative environment 100 that shows the real-life relationships between the represented persons. Within step S302, Carol starts introducing the real-life Kim and Peter to each other by pointing with a pointing device like a mouse, pen or the like to the graphical representation of Kim 112 or Peter 206 and drawing a dashed curve from Kim 112 to Peter 206 or the opposite way. By drawing this dashed curve, Kim and Peter can be introduced to the communicative environments of each other. Within step S304 data of the user's PDA is send to the PDAs of Kim and Peter comprising a message that an introduction message is being send. In order to send the data, the PDA

uses WAP or bluetooth or the internet when it is connected to the internet. Within step S306, the software comprised within the receiving PDA interprets the data and the message and triggers the display of a pop-up menu on the user interface of the receiving PDA. This pop-up menu is illustrated in Figure 4. Here 400, is the pop-up menu displayed on the user interface of the PDA of Kim. Field 402 comprises the message that the user Carol likes to introduce a friend named Peter: "Carol introduces a new friend Peter to you". The message may also comprise a graphical representation 408 like a photo or video of Peter in stead of the name. A corresponding pop-up menu is displayed on the user interface of the PDA of Peter. Then Field 402 comprises a message that the user Carol likes to introduce a friend named Kim: "Carol introduces a new friend Kim to you". When Kim or Peter want to receive more information about the person that is being introduced, optional step S312 is performed. Carol, the one who introduces the friends is represented by 410. Within this step Kim and Peter can select the name or graphical representation of the person that is being introduced. This selection is sent to the PDA of Carol. Then this PDA will retrieve personal information comprised within the PDA and send this information back to the PDA that requested for the information. The information comprises personal information like, gender and hobbies. When the person does not want to have his or her personal information being sent with introduction messages, a message comprising "not available" will be send to the receiving PDA. Upon receipt of the personal information message, this information will be displayed within the introduction message.

Within S308 Kim accepts being introduced to the new friend Peter. The graphical representation of Peter will then be added to the communicative environment of the PDA of Kim within the mode "friend and family". Kim can also decide to decline being introduced to a new friend Peter. Then the graphical representation of Peter will not be added to her communicative environment. The same holds for Peter: he can accept or decline being introduced to the new friend Kim and the graphical representation of Kim will be added to the communicative environment of the PDA of Peter only when he accepts. In order to accept, Kim and Peter must point to the "Accept" button 404 present on the pop-up menu. In order to decline Kim and Peter must point to the "Decline" button 406 on the pop-up menu, see Figure 4. After pressing one of these buttons, the pop-up will disappear from the user interface and the corresponding communicative environment will be displayed again.

Within step S310, the "Accept" message of Kim will be send to the PDA of Carol and the "Accept" message of Peter will be send to the PDA of Carol. When "Decline" was chosen, then the "Decline" message is send to the PDA of Carol. The software comprised within the PDA of Carol interprets the message and will display a solid line curve from the graphical representation of Kim 112 to Peter 206 when they both accepted being introduced to each other. Other representations

can be chosen too to indicate that Kim and Peter are being introduced to each other and have accepted.

Figure 5 illustrates some examples (not limiting) of curves between the graphical representation of Kim and Peter. Here, 500 is the graphical representation of Kim and 502 is the graphical representation of Peter. As illustrated, 504 is the situation of step S302 wherein Carol starts introducing Peter and Kim to each other. The curve 512 is then a dashed line. 506 illustrates the situation of step S310 if Kim accepts and Peter declines. Then the curve 512 comprises a part with a solid curve to indicate that Kim accepted and Peter declines. 508 illustrates the situation of step S310 if Kim declines and Peter accepts. Then the curve 512 comprises a part with a solid curve to indicate that Peter accepts and Kim declines. 510 illustrates the situation of step S310 if Kim accepts and Peter accepts. Then the curve 512 is solid curve to indicate that both accepted. The illustrated representation of the curve is not limiting.

Figure 6 illustrates the main parts of the system 600 according to the invention in a schematic way. The system comprises memories 602, 604, 606, 608, 610 and 612. These memories are connected to each other via software bus 614. The memories 602 and 604 comprise computer readable code designed to present graphical representations of persons. Memories 606 and 608 comprise computer readable code designed to present the introduction messages, 610 and 612 comprise the personal information of the persons being a member of the communicative environment. Furthermore, the system 600 comprises a processor 616 that can execute the computer readable code and it comprises an interface 620 that is connected to the software bus 614 too. This interface 620 is for example blue tooth enabled and translates the received signal into streams that can be interpreted by the system 600. The interface can also be connected to the internet or can support WAP technology. The system is comprised within a personal digital assistant 624.

CLAIMS:

1.   A method of exchanging messages, the method comprising:

displaying a first graphical representation of a first person; and

displaying a second graphical representation of a second person

characterized in that the method further comprises:

presenting a first introduction message to the first person, the first introduction

message introducing the second person to the first person; and

presenting a second introduction message to the second person; the second

introduction message introducing the first person to the second person.

2.   A method of exchanging messages according to claim 1, wherein presenting the first

introduction message and presenting the second introduction message is triggered by selecting the

first graphical representation and the second graphical representation.

3.   A method of exchanging messages according to claim 1, wherein the second

introduction message comprises the first graphical representation of the first person and the first

introduction message comprises the second graphical representation of the second person.

4.   A method of exchanging messages according to claim 1, wherein the first person

selects the second graphical representation to trigger displaying a first graphical indication between

the first graphical representation and the second graphical representation.

5.   A method of exchanging messages according to claim 1, wherein the second person

selects the first graphical representation to trigger displaying a second graphical indication between

the first graphical representation and the second graphical representation.

6.   A method of exchanging messages according to claim 1, further comprising:

sending first personal information of the first person to the second person by means

of the second introduction message; and

sending second personal information of the second person to the first person by means of the first introduction message.

7.   An interactive display conceived to exchange messages, the interactive display comprising:

first display means (602) conceived to display a first graphical representation of a first person; and

second display means (604) conceived to display a second graphical representation of a second person

characterized in that the interactive display further comprises:

first presenting means (606) conceived to present a first introduction message to the first person; the first introduction message introducing the second person to the first person; and

second presenting means (608) conceived to present a second introduction message to the second person; the second introduction message introducing the first person to the second person.

8.   An interactive display according to claim 7, further comprising:

first personal information means (610) conceived to present first personal information of the first person to the second person;

second personal information means (612) conceived to present second personal information of the second person to the first person.

9.   A computer program product designed to perform the method according to any of the claims 1 to 6.

10.   A personal digital assistant (624) comprising a computer program product according to claim 9.
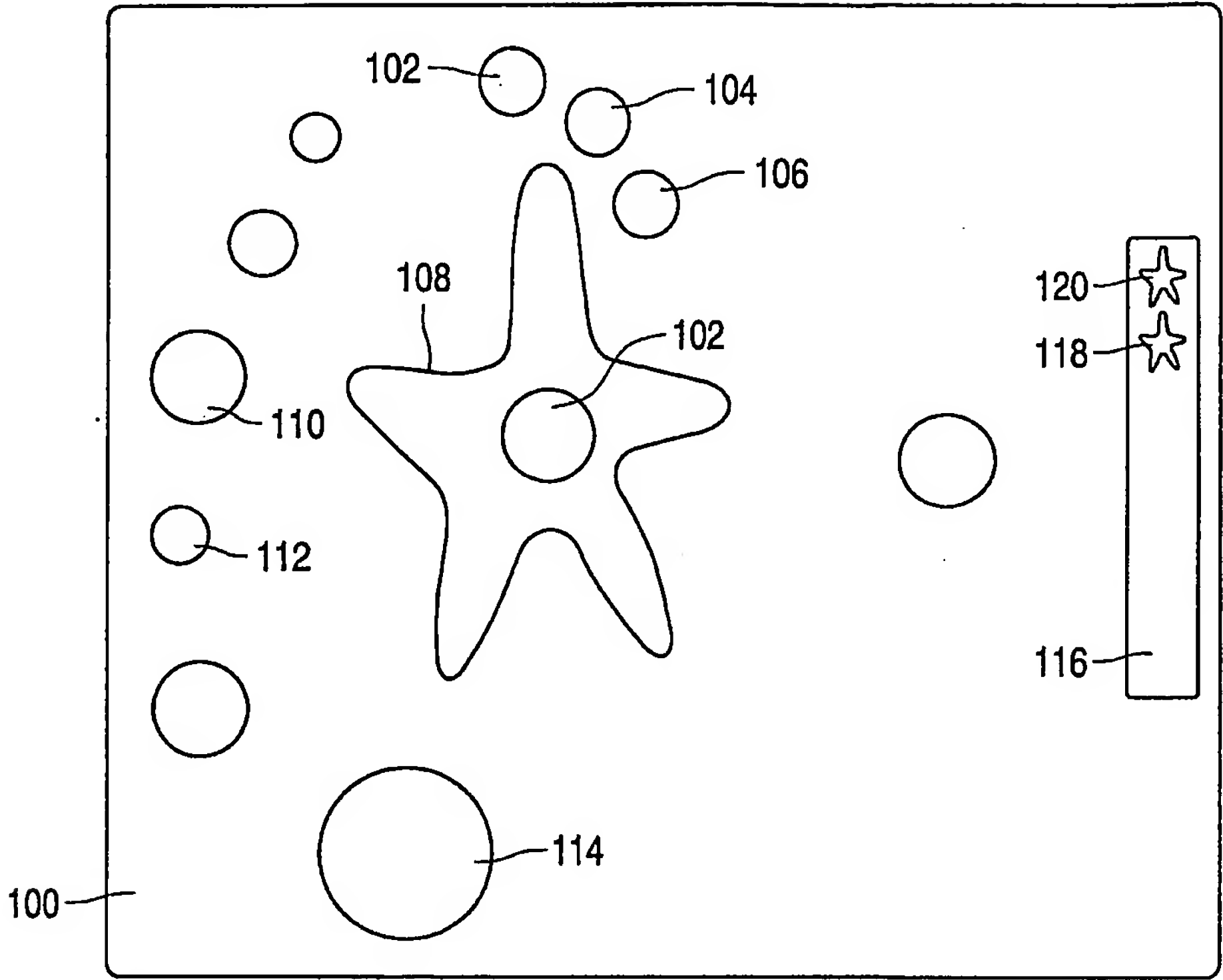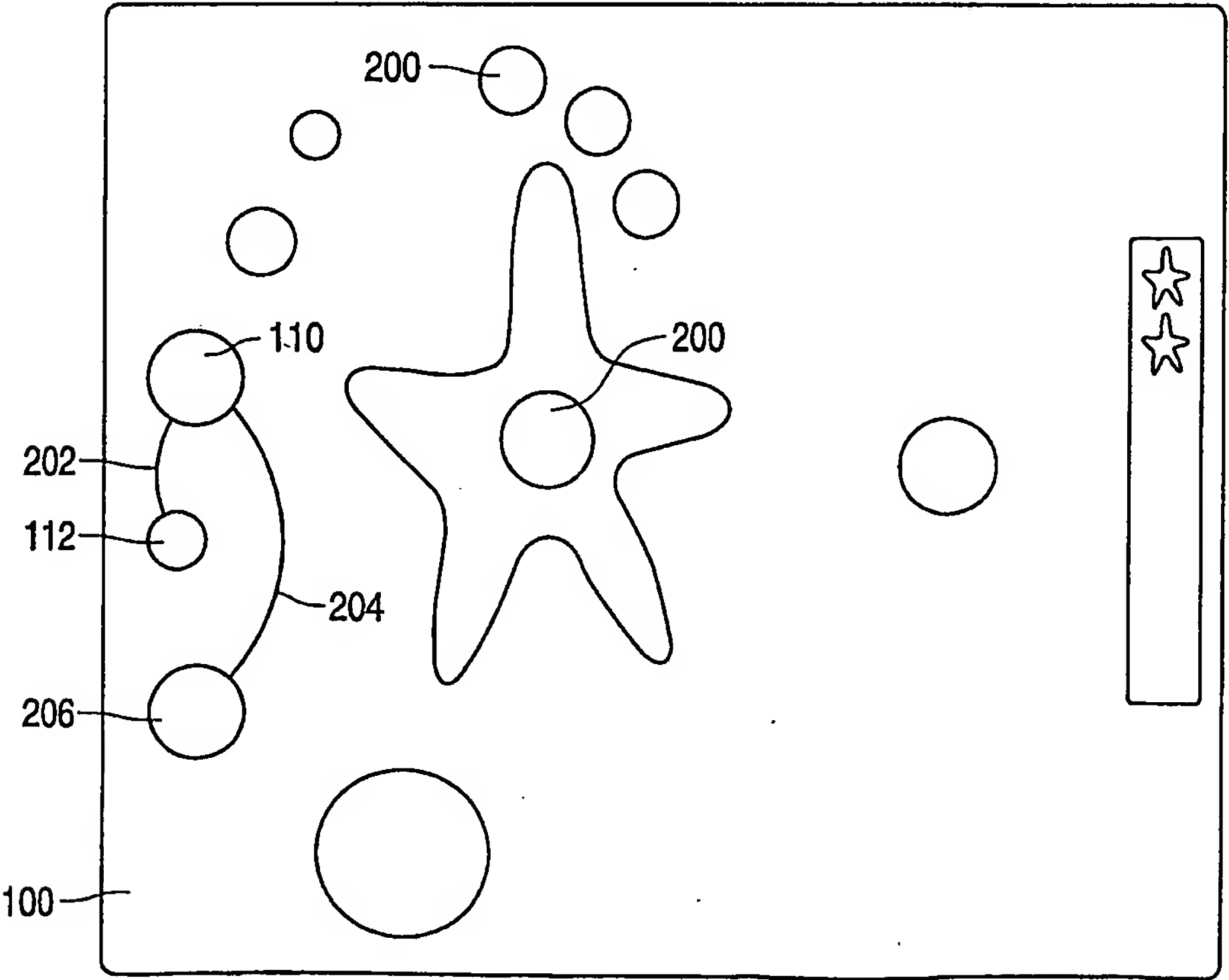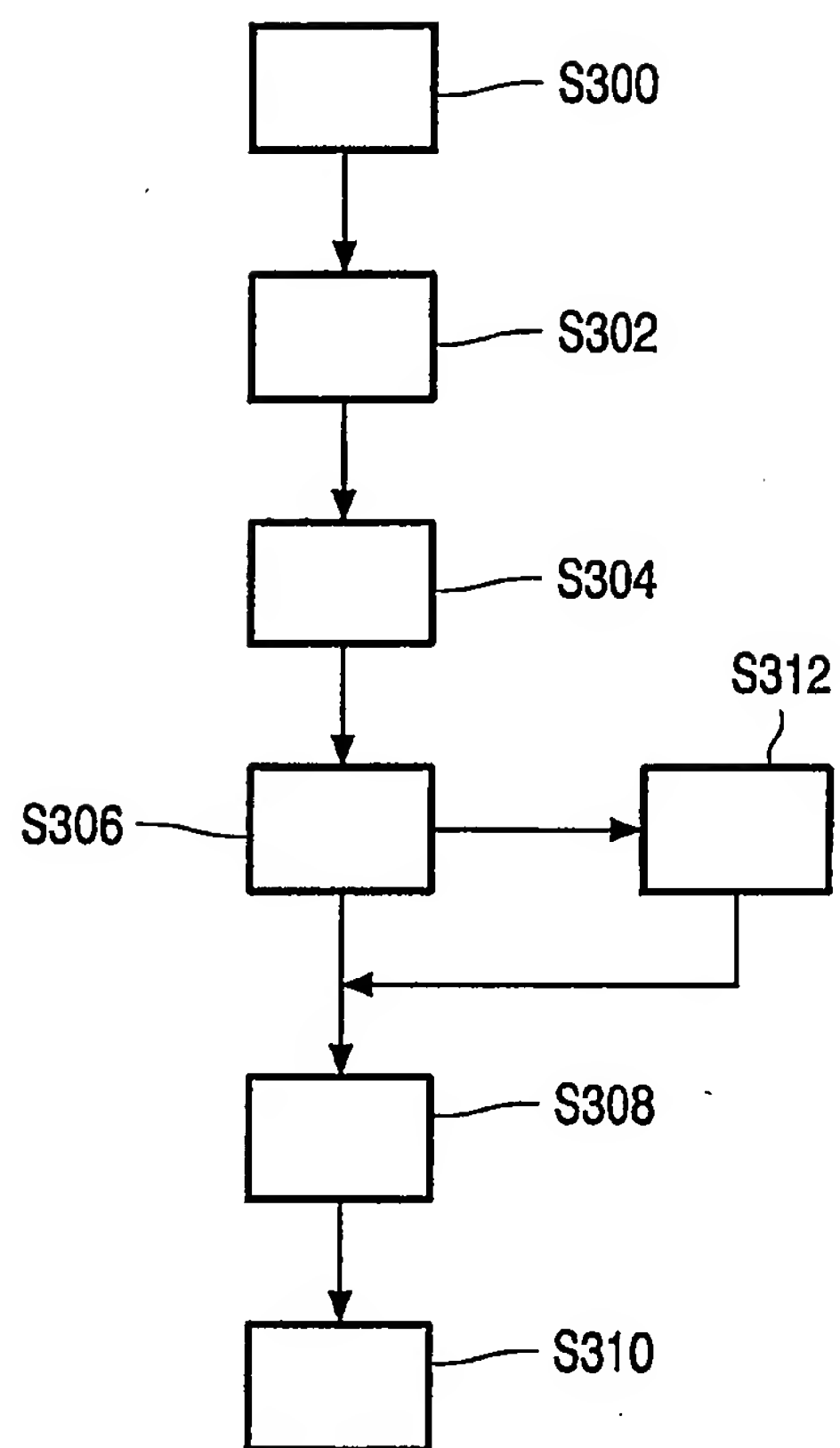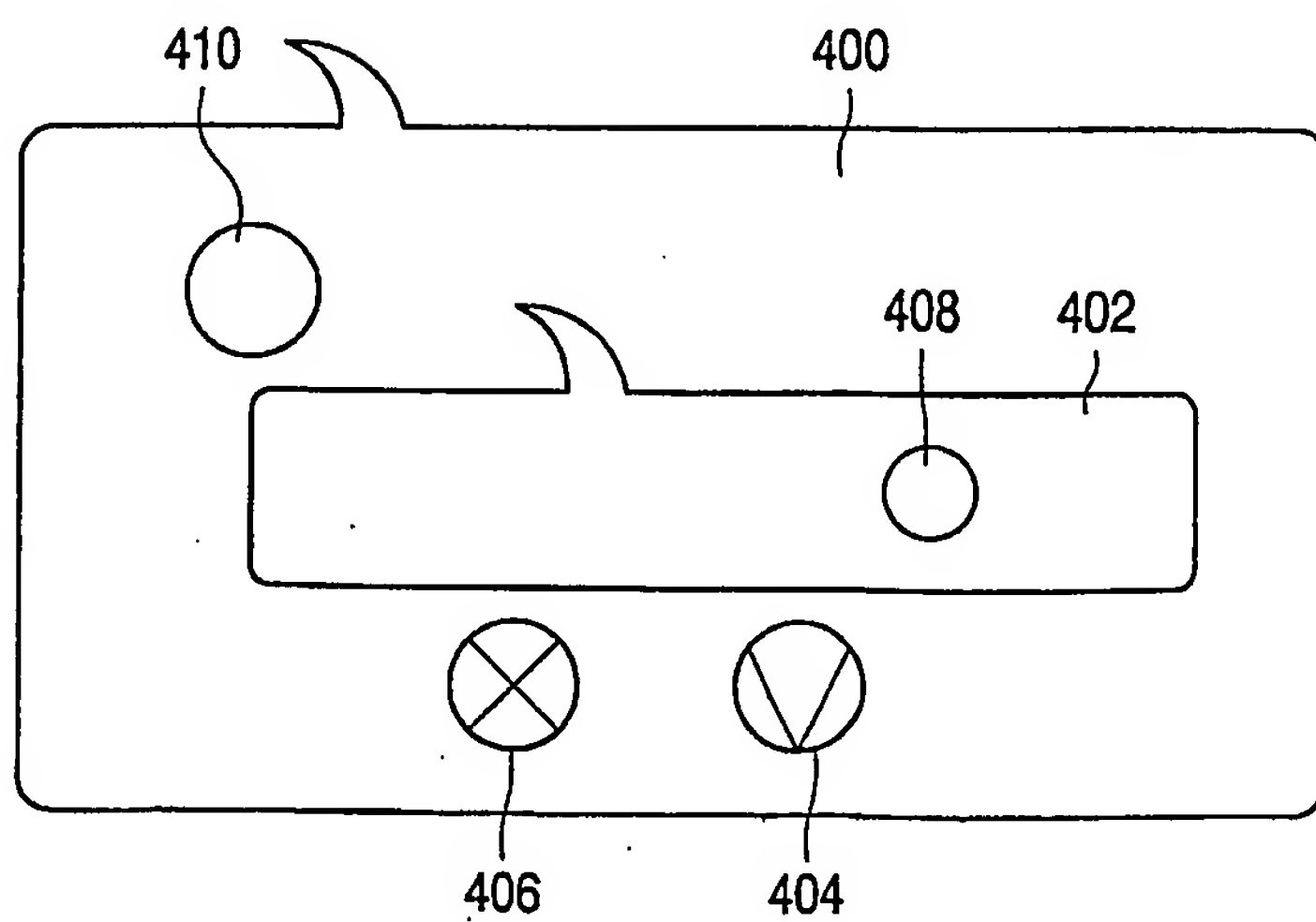
FIG. 1

FIG. 2

S300

S302

S304

S312

S306

S308

S310

FIG. 3

410

400

408   402

406   404

FIG. 4

FIG. 5

FIG. 6

PATENT COOPERATION TREATY

PCT

DECLARATION OF NON-ESTABLISHMENT OF INTERNATIONAL SEARCH REPORT

(PCT Article 17(2)(a), Rules 13ter.1(c) and Rule 39)

Applicant's or agent's file reference PHTW010006WO	IMPORTANT DECLARATION	Date of mailing*(day/month/year)* 10/10/2002
International application No. PCT/ IB 02/ 02879	International filing date*(day/month/year)* 08/07/2002	(Earliest) Priority date*(day/month/year)* 25/07/2001

International Patent Classification (IPC) or both national classification and IPC	g06f17/60

Applicant
KONINKLIJKE PHILIPS ELECTRONICS N.V.

This International Searching Authority hereby declares, according to Article 17(2)(a), that **no international search report will be established** on the international application for the reasons indicated below

1. [X] The subject matter of the International application relates to:

   a. [ ] scientific theories.

   b. [ ] mathematical theories.

   c. [ ] plant varieties.

   d. [ ] animal varieties.

   e. [ ] essentially biological processes for the production of plants and animals, other than microbiological processes and the products of such processes.

   f. [X] schemes, rules or methods of doing business.

   g. [ ] schemes, rules or methods of performing purely mental acts.

   h. [ ] schemes, rules or methods of playing games.

   i. [ ] methods for treatment of the human body by surgery or therapy.

   j. [ ] methods for treatment of the animal body by surgery or therapy.

   k. [ ] diagnostic methods practised on the human or animal body.

   l. [ ] mere presentations of information.

   m. [ ] computer programs for which this International Searching Authority is not equipped to search prior art.

2. [ ] The failure of the following parts of the International application to comply with prescribed requirements prevents a meaningful search from being carried out:

   [ ] the description   [ ] the claims   [ ] the drawings

3. [ ] The failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions prevents a meaningful search from being carried out:

   [ ] the written form has not been furnished or does not comply with the standard.

   [ ] the computer readable form has not been furnished or does not comply with the standard.

4. Further comments:

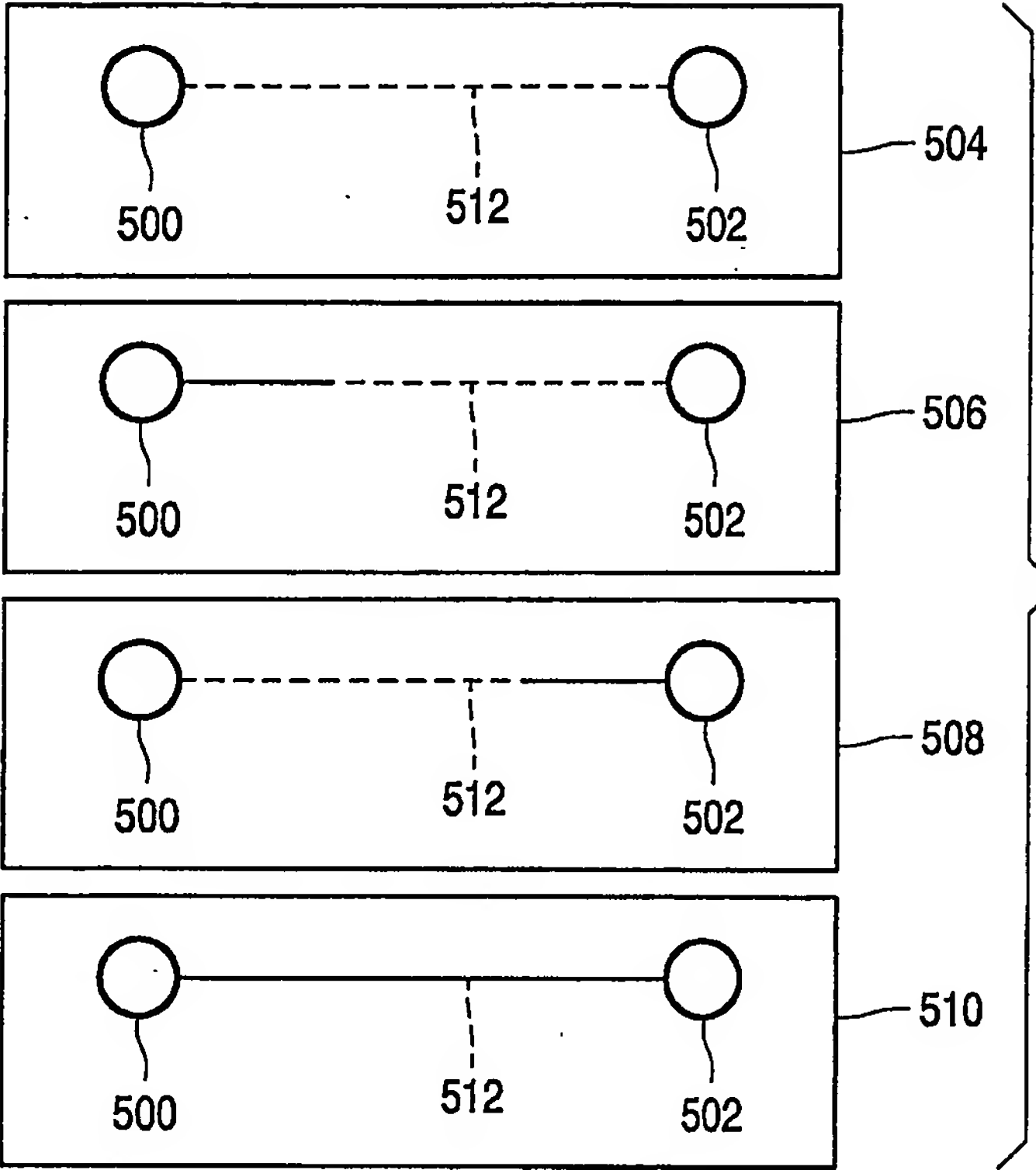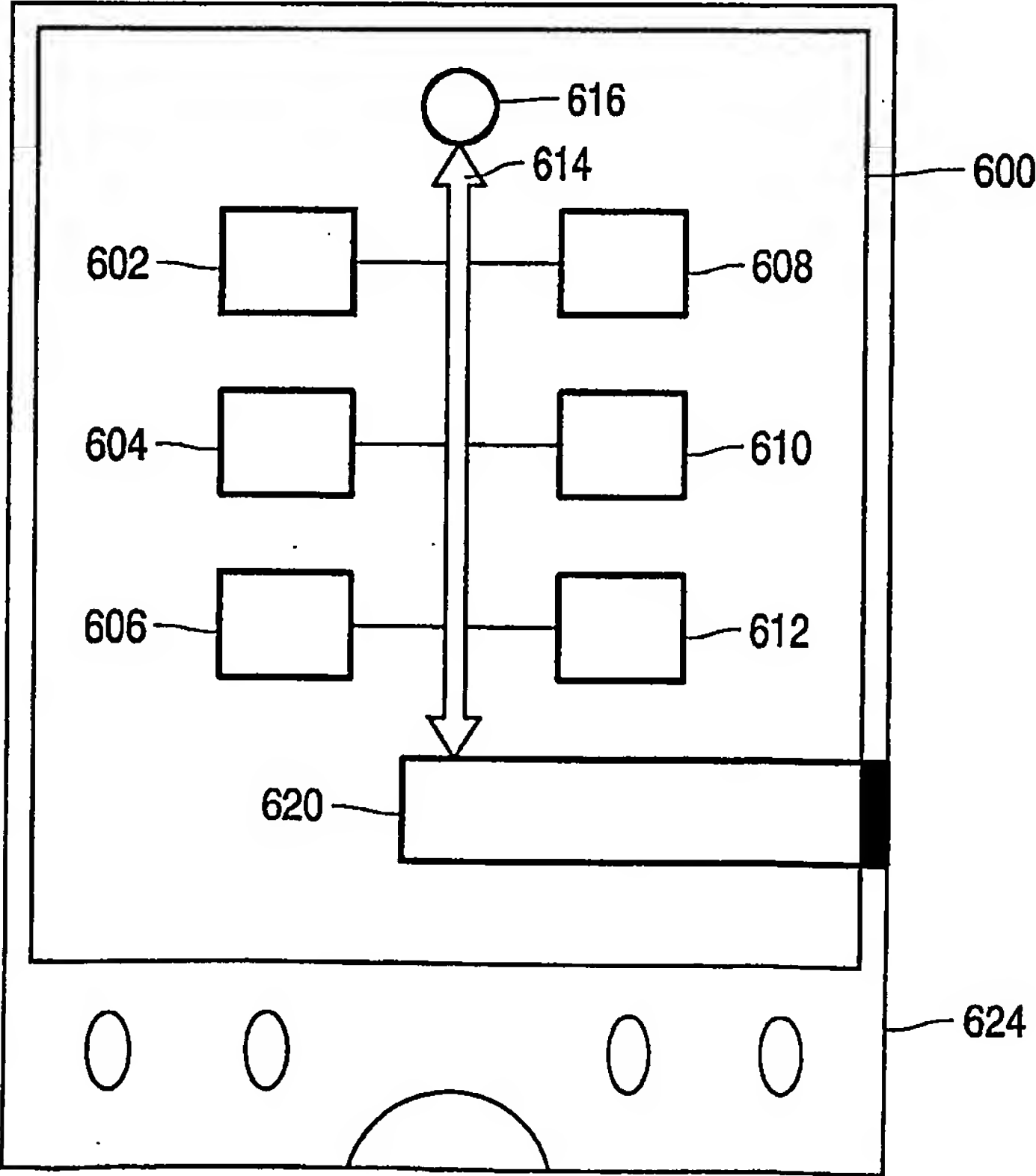| Name and mailing address of the International Searching Authority	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Selwa Harris

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FURTHER INFORMATION CONTINUED FROM   PCT/ISA/ 203

The claims relate to subject matter for which no search is required according to Rule 39 PCT. Given that the claims are formulated in terms of such subject matter or merely specify commonplace features relating to its technological implementation, the search examiner could not establish any technical problem which might potentially have required an inventive step to overcome. Hence it was not possible to carry out a meaningful search into the state of the art (Art. 17(2)(a)(i) and (ii) PCT; see Guidelines Part B Chapter VIII, 1-6).

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.